THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Direct Testimony

of

Steven J. Tambini

In the Matter of the Revision of Rates

Filed by

Massachusetts-American Water Company

DTE _____

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1. Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Steven J. Tambini and my current business address is 500 Grove Street, Haddon Heights, New Jersey 08035.

2. Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the American Water Works Service Company (hereinafter referred to as "AWWSC" or the "Service Company") as the Director Engineering for the Northeast Region.

3. Q. WHAT ARE YOUR RESPONSIBILITIES IN THIS POSITION?

A. My present responsibilities include managing the planning, design and construction engineering activities for several utility operating subsidiaries of the American Water Works Company in the Northeast Region, including the Massachusetts-American Water Company.

4. Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND

PROFESSIONAL REGISTRATIONS AND AFFLIATIONS?

A. I graduated in 1981 from Clarkson University in Potsdam, NY with a Bachelor of Science Degree in Civil and Environmental Engineering. I also graduated from Clarkson University in 1983 with a Masters of Science Degree in Environmental

Engineering. I am a registered Professional Engineer in New Jersey and New York. I am a member of the American Water Works Association, the New England Water Works Association, and the American Society of Civil Engineers.

5. Q. WHAT HAS BEEN YOUR BUSINESS EXPERIENCE?

A. I have eighteen years of experience in the water and wastewater utility engineering field. From 1982 to 1984, I was employed by Camp Dresser and McKee, Inc. as an Environmental Engineer. I began my employment as an engineer with American Water Works Service Company in 1984. In 1991 I was transferred to the New Jersey-American Water Company as an Engineering Manager. In 1994, I was transferred to the American Water Works Service Company to become the Director-Operations Engineering for thirteen subsidiaries companies located in eleven states. I was responsible for managing the engineering and capital improvement programs for the subsidiary companies located in the states of Connecticut, Iowa, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New York, Ohio, Tennessee, and Virginia. In January 2000, I transferred to Haddon Heights, New Jersey, in conjunction with the re-organization of the New England companies with New Jersey-American Water Company, to form the Northeast Region. The Northeast Region includes subsidiaries located in Connecticut, Massachusetts, New Hampshire, New Jersey, and New York. I am currently the Director of Engineering.

6. Q. HAVE YOU PREVIOSULY PARTICIPATED IN REGULATORY MATTERS?

A. Yes. I have participated in the rate cases in New Jersey, New York and Ohio. My primary responsibility has been to support capital additions to rate base.

7. Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS CASE?

A. The purpose of my testimony is to describe current source of supply issues related to the Massachusetts-American Water Company - Hingham System (serving customers in Hingham, Hull, Cohasset, and Norwell) and to support certain costs related to source of supply, demand management, and unaccounted for water reduction programs.

8. Q. PLEASE DESCRIBE THE CURRENT SOURCES OF SUPPLY FOR THE

HINGHAM SYSTEM AND ANY REGULATORY LIMITS IMPOSED UPON SOURCE OF SUPPLY WITHDRAWALS.

A. The Hingham System derives its sources of supply from several surface water and ground water sources. A list of the sources is provided in Exhibit SJT-1. With the exception of the Downing Street well, all sources are treated at the George W. Johnstone Water Treatment Plant.

Withdrawals of water in excess of 100,000 gallons per day (gpd) are regulated by the Massachusetts Department of Environmental Protection (MADEP) under the Water Management Act (WMA). In accordance with provisions of the WMA when it was established, the authorized combined annual average withdrawal for the Hingham system was, as still is, 3.51 million gallons per day (MGD). This registered withdrawal was established in January 1988 and it was based upon average annual historical usage between 1981 and 1985. Provisions of the WMA include a threshold volume limit of 100,000 gpd above the registered withdrawal. A WMA permit for a new withdrawal is required if an existing system withdraws in excess of the threshold volume.

9. Q. SINCE THE WMA PROGRAM BEAGAN IN 1988, HAS THE HINGHAM

SYSTEM EVER EXCEEDED ITS AVERAGE ANNUAL WITHDRAWAL REGISTRATION THRESHOLD VOLUME UNDER THE WMA?

A. Yes, in 1998 the annual average withdrawal from all sources was 3.636 mgd, 0.026 mgd (or 0.72%) above the 3.61 mgd threshold limit.

10. Q. WHAT WAS THE REASON FOR THE EXCEEDANCE OF THE

RESTORATION THRESHOLD VOLUME?

A. In 1998, the Hingham District had usually higher than normal unaccounted for water. That year 25.8% of the water withdrawn from sources was classified as "unaccounted-for". In the years prior to 1998, the Water Company conducted extensive flushing of its water distribution system as part of the plan to place its new water treatment plant in service. The efforts related to flushing the distribution system and aging infrastructure likely caused higher than normal leaks in the system. During the same period, sewer construction in Hull and Cohasset, resulted in rock blasting operations proximate to existing water mains. This is another suspected cause of higher than normal system leaks.

11. Q. DID THE MADEP TAKE ANY ACTIONS RELATIVE TO EXCEEDING THE

THRESHOLD VOLUME?

A. Yes. The MADEP took enforcement action against the Water Company for alleged violation of the WMA. The Water Company and the MADEP negotiated an Administrative Consent Order (ACOP-NE-99-F001), attached as Exhibit SJT-2, to settle the allegations.

12. Q. PLEASE DESCRIBE THE MAJOR REQUIRMENTS OF THE CONSENT

ORDER.

A. The Consent Order has several requirements relative to source of supply development, demand management, water conservation and reduction of unaccounted-for water. The major components of the Consent order include: programs for testing customer meters; programs for testing master meters; programs for surveying the distribution system for leaks; requirements for filing for conservation based water rates; programs for performing a water audit of the distribution system; program for performing an audit of distribution system flushing practices; development of a water conservation plan; development of a water needs report; and development of a water demonstration project. This is simply a summary, and the Consent Order in Exhibit SJT-2, provides the detailed requirements.

13. Q. PLEASE GENERALLY DESCRIBE THE LEAK SURVEY

REQUIREMENTS?

A. Prior to the Consent Order notification, the Water Company recognized that unaccounted-for water was at levels that were higher than normal. When its business plan was developed in 1998 for fiscal year 1999, plans were in place to perform a comprehensive leak survey of the distribution system. Following negotiations with the MADEP, the activities and results of the 1999 leak survey effort, and the follow-up repairs of confirmed leaks, were incorporated as a requirement of the Consent Order. Additional Leak surveys were required to be included as a part of a required plan to be submitted under the Consent Order to reduce unaccounted-for water. The Consent Order requires that the distribution system be surveyed once every two years.

14. Q. PLEASE DESCRIBE THE RESULTS OF THE 1999 LEAK SURVEY?

A. A report summarizing the leak survey results form 1999 was submitted to the MADEP in January 2000. The 1999 leak survey work was a comprehensive survey of the entire distribution system and it was conducted by two separate consultants. In addition, representatives from an affiliated company, the New Jersey-American Water Company, also performed some limited survey work in 1999. Fifty-nine (59) suspected leaks were identified during the 1999 effort and all confirmed leaks on pipelines, valves, and services owned by the Water Company were repaired. At the end of 1999, the percentage of unaccounted for water was reduced to 17.9% from the 1998 level of 25.8%.

15. Q. PLEASE DESCRIBE THE 2000 LEAK SURVEY EFFORTS AND ANY

PRELIMINARY RESULTS?

A. Proposals were sought and received from several qualified contractors to perform a comprehensive survey of the entire distribution system in 2000. Based upon the proposals submitted, a contract was award to Health Consultants. The work performed in 2000 has not been summarized and submitted to the MADEP in report form yet. The level of unaccounted for water in the system for a 12 month period ending September 2000 is 17.9%; however, during 2000 the level has been as low as about 15%.

2. Q. WHAT WAS THE COST OF THE 2000 LEAK SURVEY WORK?

A. Four proposals were received ranging in price from $37,400 to Heath's low cost proposal at $17,772. The other two proposals were: $26,900 and $25,600.

2. Q. BASED UPON THE RESULTS OF WORK PERFORMED TO DATE AND

THE REQUIREMENTS OF THE CONSENT ORDER, WHAT IS THE

WATER COMPANY'S APPROACH TO FUTURE LEAK DETCETION

EFFORTS?

A. Comprehensive annual leak detection has produced significant and positive results towards reducing the percentage and volume of unaccounted for water. The Consent Order has many components; however, the reduction of unaccounted for water is a significant and essential element of the plan to keep source of supply withdrawals below their regulatory limits. The recommended approach is to continue the program of annually surveying the distribution system for leaks. Furthermore, it is recommended that the annual cost of leak detection be included in the cost of service for the Hingham System.

3. Q. PLEASE DESCRIBE THE WATER CONSERVATION PLAN?

A. A Water Conservation Implementation Plan was submitted to the MADEP in May 2000. According to the Consent Order, the plan must include the following elements: an outdoor water restriction program; a program to provide water savings devices to the Company's residential customers; public education; a program to monitor changes to commercial and industrial uses; and a program to encourage municipalities to develop standards for water savings devices in new construction.

4. Q. WHAT IS THE RESIDENTIAL WATER SAVINGS KIT PROGRAM?

A. The Water Company must offer its residential customers a free indoor water

savings kit. The kit will include: a low flow showerhead; faucet aerators; a toilet tank displacement device; toilet leak tablets; and educational information. Offers will be mailed to all customers and customers will be able to order up to two kits per account free of charge. This will be a one time offer that will have an expiration period.

5. Q. WHAT IS THE ESTIMATED COST OF THIS PROGRAM?

A. Exhibit SJT-3 provides an estimate of the project costs. It is estimated that about 50% of residential customers will request 2 kits. The cost of the program is estimated to be approximately $100,000, including the offer mailing and related publicity. Although the entire $100,000 will be expended in 2001, for ratemaking purposes the Company is proposing a three-year amortization of these costs.

6. Q. ARE THERE ANY ADDITIONAL PROGRAMS THAT WERE INCLUDED

IN THE PLAN?

A. Yes, the Water Conservation Implementation Plan also proposed a program that would address the water needs of proposed development. The proposed plan requires the developers to either: balance the proposed water needs of their development with water savings in the existing system or develop feasible supplemental supplies.

7. Q. ARE THERE ANY CURRENT DEVELOPERS IMPACTED BY THIS

PROGRAM?

A. The Water Conservation Implementation Plan has not been approved by the MADEP; however, a few larger developers have been working with the Water Company to potentially develop supplemental sources of supply. These projects are in concept stages only and includes the possibility of using desalination as a potential supplemental source of supply.

8. Q. DOES THE HINGHAM SYSTEM HAVE ADEQUATE SOURCES OF

SUPPLY AND ADEQUATE LIMITS ON ITS WMA WITHDRAWAL

REGISTRATION TO MEET THE NEEDS OF ITS CUTOMERS?

A. The Hingham System has adequate sources of supply to meet the needs of its customers. During 1999, an extreme drought year, the Water Company met the needs of the Hingham System customers and kept within the threshold registration volume for the year. Efforts to reduce unaccounted for water though leak surveys should continue. This effort has had, and will continue to have the greatest impact upon demands and the system's ability to stay within the regulatory limits. All of the other programs under the Consent Order that are required by the MADEP have been, or are being, implemented in accordance with agreed upon schedules; however, the impact of these efforts is expected to be less significant than the unaccounted for water reduction program. The costs of some of these programs, such as the residential water savings kits, are significant and should be reflected in the cost of service to the existing customers.

9. Q. HOW WILL THE WATER COMPANY ADDRESS THE NEED FOR WATER

IN THE FUTURE?

A. If the Water Conservation Implementation Plan is approved by the MADEP, new development will need to balance water demands with water savings or develop

supplemental supplies. In addition, the Water Company is in the process of conducting a Comprehensive Planning Study for all its systems. The study will project future demands and determine the need for additional supplies, if required. The impact of the Water Conservation Plan on the future water demands will be incorporated into the planing process.

10. Q. Does this conclude your testimony at this time?

A. Yes, it does.